

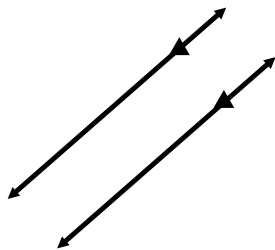
## Chapter 3: Parallel and Perpendicular Lines

### 3.1 Relationships Between Lines

Two lines are parallel lines if they lie in the same plane and do not intersect.

|| is the symbol for parallel in written work

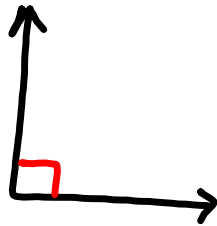
Arrows on lines show parallel lines in a picture:



Two lines are perpendicular lines if they intersect to form a right angle.

$\perp$  is the symbol for perpendicular in written work.

In pictures, the right angle marking **MUST** be drawn in to show  $90^\circ$  angles.



Two lines are skew lines if they do not lie in the same plane and never intersect.

Checkpoint at the top of page 109.

1.  $x \parallel y$

2.  $z \perp x$

3.  $z$  is skew to  $y$

Two planes are parallel planes if they do not intersect.

A line perpendicular to a plane is a line that intersects a plane in a point and that is perpendicular to every line in the plane that intersects it.

Checkpoint on the bottom of page 109.

4.  $\overline{TX}$ ,  $\overline{QR}$ ,  $\overline{QU}$ ,

5. QRST

6.  $\overline{TX}$ ,  $\overline{QU}$ ,  $\overline{SW}$

Name

3.1

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